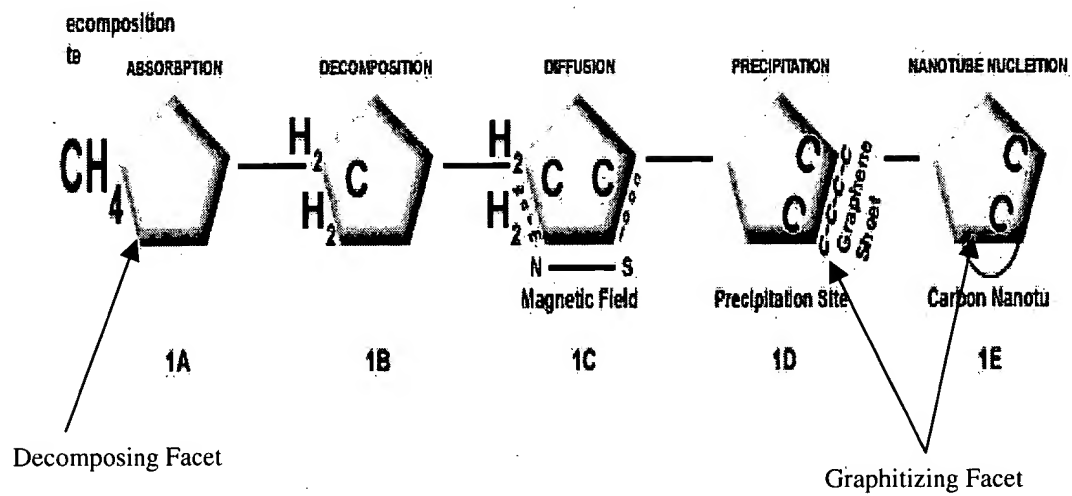


Figures 1A-1E



Figures 1F-1J

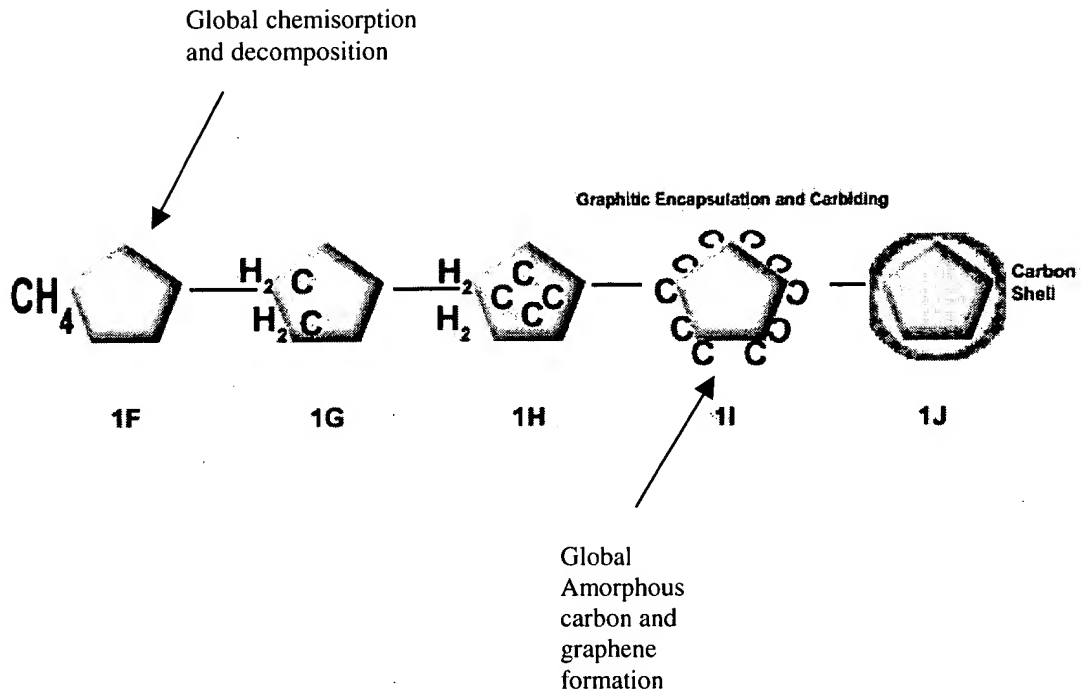
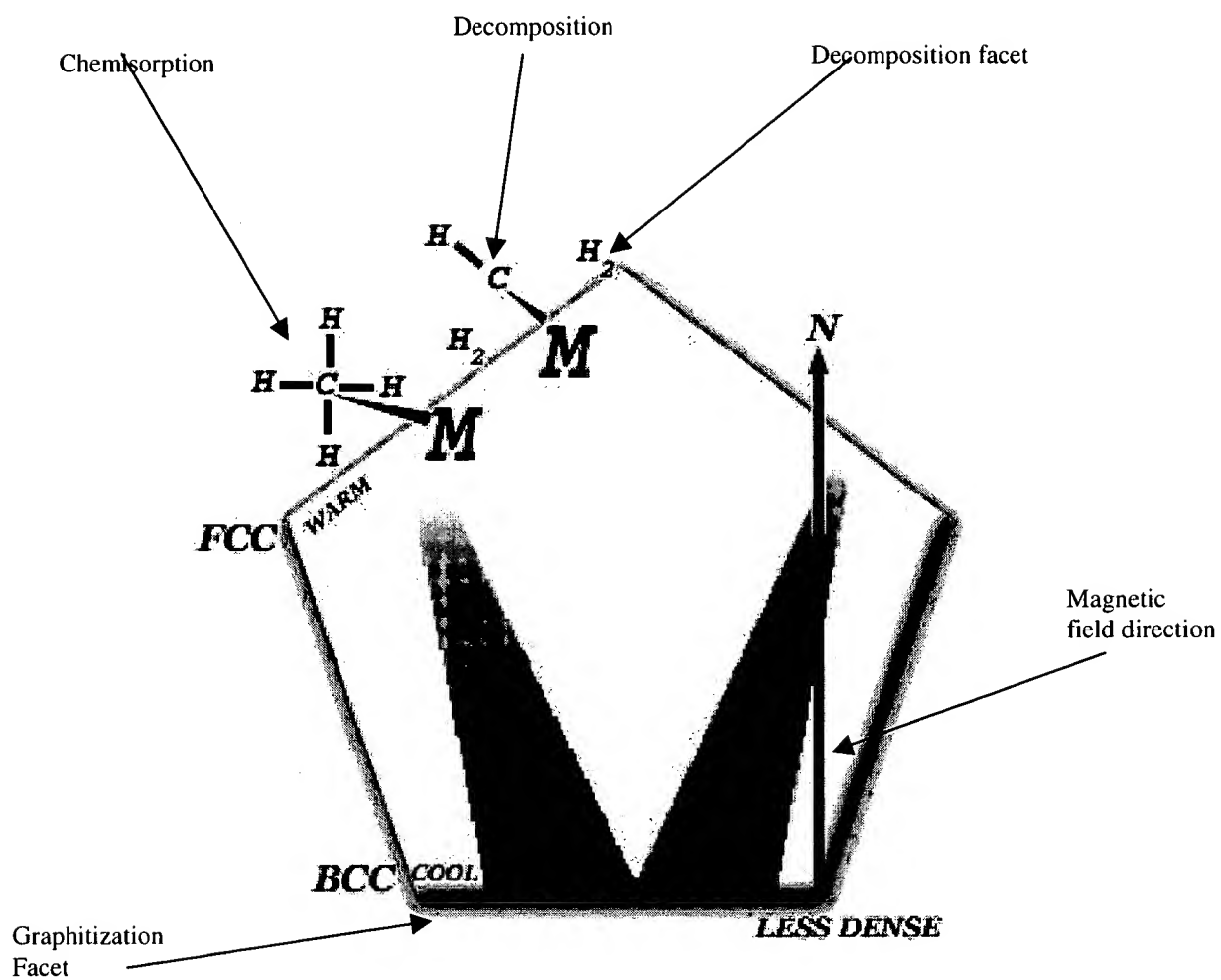


Figure 1F-1J

The diagram illustrates a MAG-CVD system. On the left, a large chamber contains a "Decomposition product" and a "Carbon Nanotube" growth region. A "Fe nanoparticle" is shown near the growth region. A "Resistant heater" is located within the chamber. A "Quartz Reaction Vessel" is positioned on the right, containing a "Superconducting Magnet" and a "Furnace". A "Substrate Holder" is located below the furnace. A "Direction of External Magnetic Field" is indicated by a downward arrow labeled "N" and "S".

66

Figure 3



1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60	2060-61	2061-62	2062-63	2063-64	2064-65	2065-66	2066-67	2067-68	2068-69	2069-70	2070-71	2071-72	2072-73	2073-74	2074-75	2075-76	2076-77	2077-78	2078-79	2079-80	2080-81	2081-82	2082-83	2083-84	2084-85	2085-86	2086-87	2087-88	2088-89	2089-90	2090-91	2091-92	2092-93	2093-94	2094-95	2095-96	2096-97	2097-98	2098-99	2099-00	2100-01	2101-02	2102-03	2103-04	2104-05	2105-06	2106-07	2107-08	2108-09	2109-10	2110-11	2111-12	2112-13	2113-14	2114-15	2115-16	2116-17	2117-18	2118-19	2119-20	2120-21	2121-22	2122-23	2123-24	2124-25	2125-26	2126-27	2127-28	2128-29	2129-30	2130-31	2131-32	2132-33	2133-34	2134-35	2135-36	2136-37	2137-38	2138-39	2139-40	2140-41	2141-42	2142-43	2143-44	2144-45	2145-46	2146-47	2147-48	2148-49	2149-50	2150-51	2151-52	2152-53	2153-54	2154-55	2155-56	2156-57	2157-58	2158-59	2159-60	2160-61	2161-62	2162-63	2163-64	2164-65	2165-66	2166-67	2167-68	2168-69	2169-70	2170-71	2171-72	2172-73	2173-74	2174-75	2175-76	2176-77	2177-78	2178-79	2179-80	2180-81	2181-82	2182-83	2183-84	2184-85	2185-86	2186-87	2187-88	2188-89	2189-90	2190-91	2191-92	2192-93	2193-94	2194-95	2195-96	2196-97	2197-98	2198-99	2199-00	2200-01	2201-02	2202-03	2203-04	2204-05	2205-06	2206-07	2207-08	2208-09	2209-10	2210-11	2211-12	2212-13	2213-14	2214-15	2215-16	2216-17	2217-18	2218-19	2219-20	2220-21	2221-22	2222-23	2223-24	2224-25	2225-26	2226-27	2227-28	2228-29	2229-30	2230-31	2231-32	2232-33	2233-34	2234-35	2235-36	2236-37	2237-38	2238-39	2239-40	2240-41	2241-42	2242-43	2243-44	2244-45	2245-46	2246-47	2247-48	2248-49	2249-50	2250-51	2251-52	2252-53	2253-54	2254-55	2255-56	2256-57	2257-58	2258-59	2259-60	2260-61	2261-62	2262-63	2263-64	2264-65	2265-66	2266-67	2267-68	2268-69	2269-70	2270-71	2271-72	2272-73	2273-74	2274-75	2275-76	2276-77	2277-78	2278-79	2279-80	2280-81	2281-82	2282-83	2283-84	2284-85	2285-86	2286-87	2287-88	2288-89	2289-90	2290-91	2291-92	2292-93	2293-94	2294-95	2295-96	2296-97	2297-98	2298-99	2299-00	2300-01	2301-02	2302-03	2303-04	2304-05	230
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Figure 5

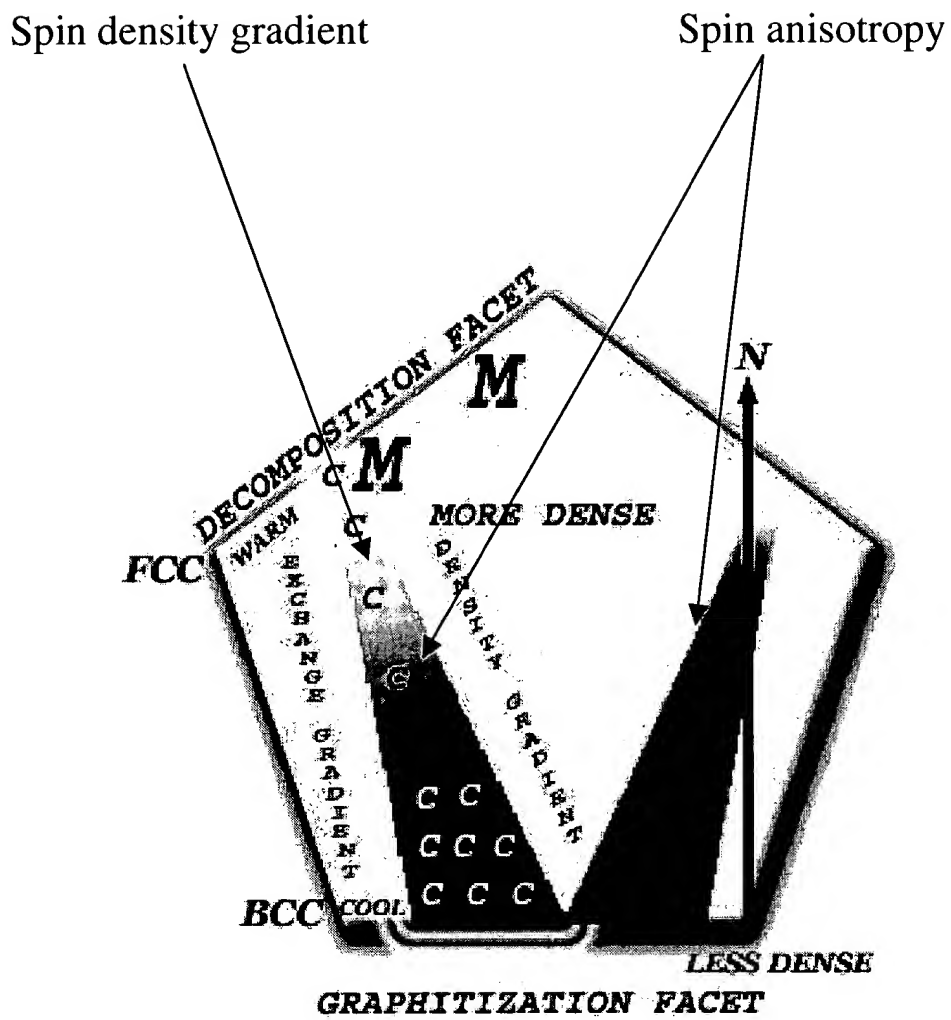


Figure 5

A diagram showing a polymer chain segment enclosed within a pentagonal unit cell. The chain is represented by the sequence $C-M-C-M-C-M-C-M$, where C and M are bold letters. An arrow points from the top-left corner of the image to the second M in the chain sequence.

[illegible]

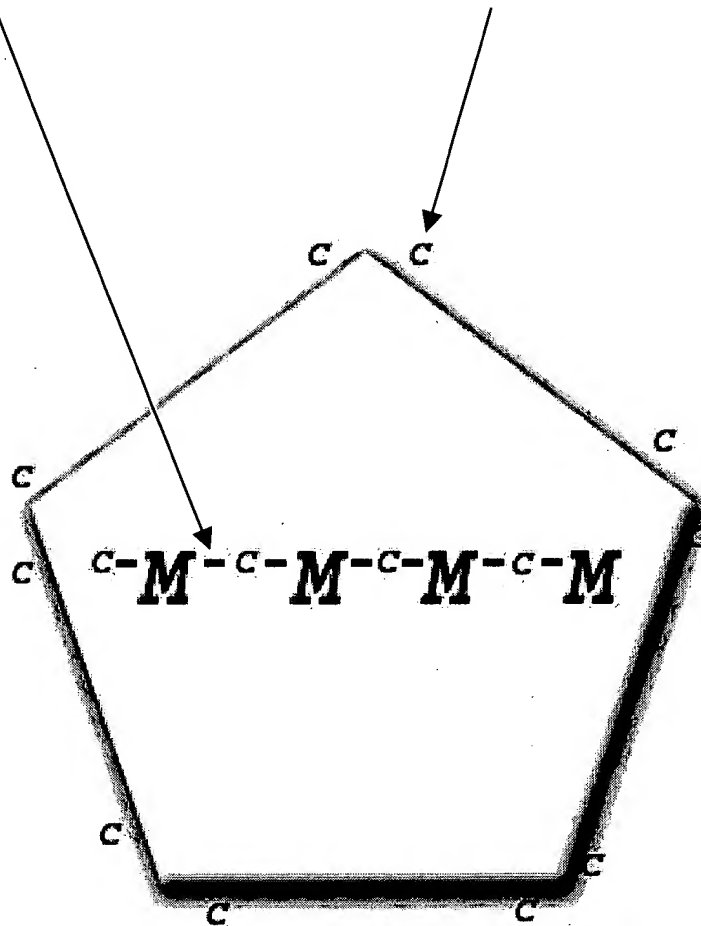
Case B2 Unstable metal carbides Global surface graphitization

Global surface graphitization



Figure 8

Case B3 stable metal carbides Global surface amorphous carbon



B3- Stable Metal Carbide

Figure 9

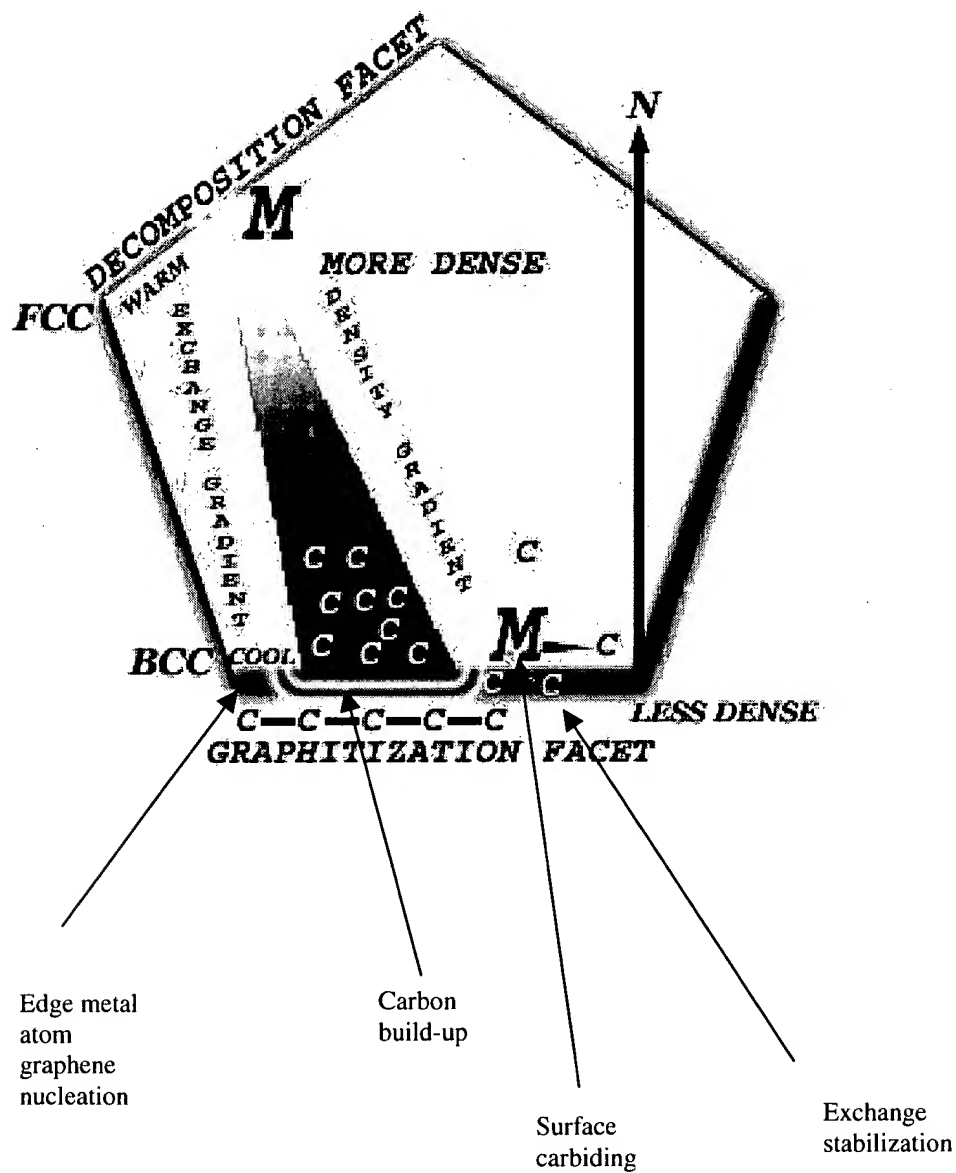
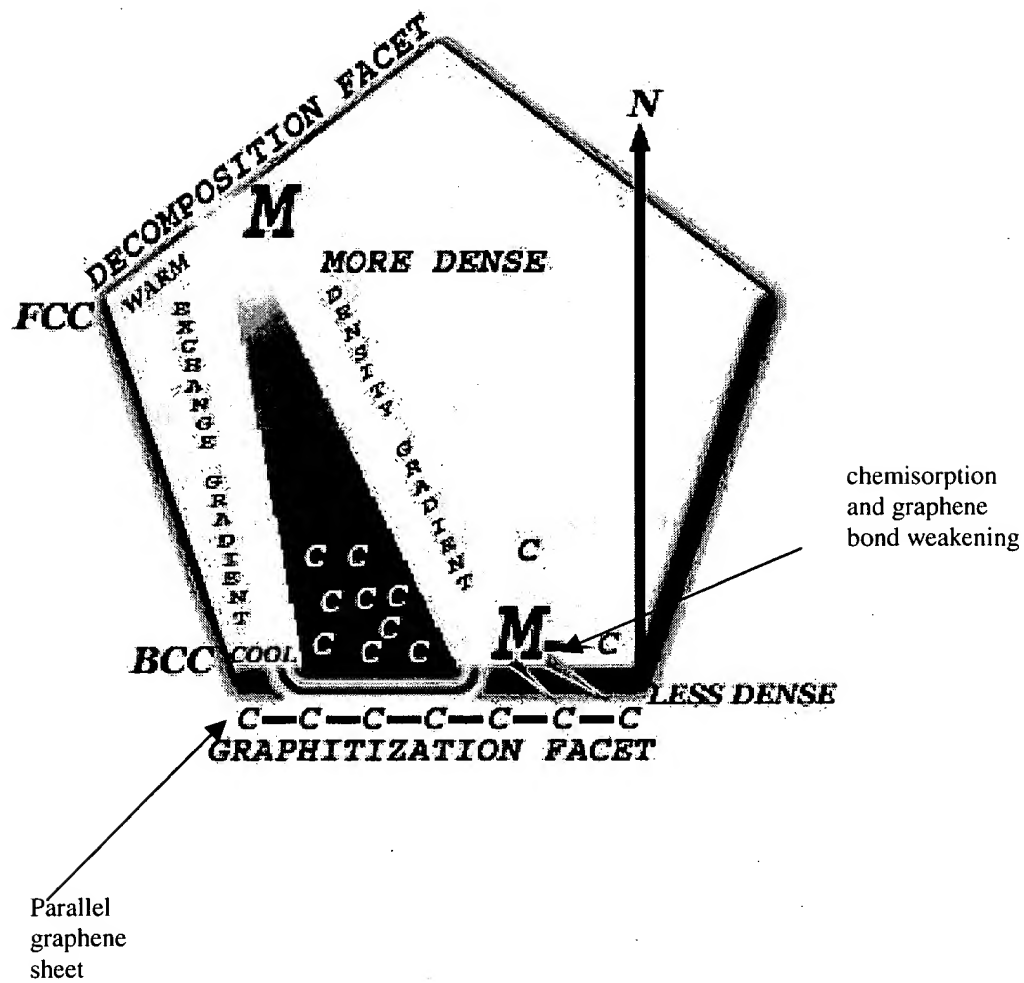


Figure 10



1170011	117013	117015	117016	117017	117018	117019	117020	117021	117022	117023	117024	117025	117026	117027	117028	117029	117030	117031	117032	117033	117034	117035	117036	117037	117038	117039	117040	117041	117042	117043	117044	117045	117046	117047	117048	117049	117050	117051	117052	117053	117054	117055	117056	117057	117058	117059	117060	117061	117062	117063	117064	117065	117066	117067	117068	117069	117070	117071	117072	117073	117074	117075	117076	117077	117078	117079	117080	117081	117082	117083	117084	117085	117086	117087	117088	117089	117090	117091	117092	117093	117094	117095	117096	117097	117098	117099	117100	117101	117102	117103	117104	117105	117106	117107	117108	117109	117110	117111	117112	117113	117114	117115	117116	117117	117118	117119	117120	117121	117122	117123	117124	117125	117126	117127	117128	117129	117130	117131	117132	117133	117134	117135	117136	117137	117138	117139	117140	117141	117142	117143	117144	117145	117146	117147	117148	117149	117150	117151	117152	117153	117154	117155	117156	117157	117158	117159	117160	117161	117162	117163	117164	117165	117166	117167	117168	117169	117170	117171	117172	117173	117174	117175	117176	117177	117178	117179	117180	117181	117182	117183	117184	117185	117186	117187	117188	117189	117190	117191	117192	117193	117194	117195	117196	117197	117198	117199	117200	117201	117202	117203	117204	117205	117206	117207	117208	117209	117210	117211	117212	117213	117214	117215	117216	117217	117218	117219	117220	117221	117222	117223	117224	117225	117226	117227	117228	117229	117230	117231	117232	117233	117234	117235	117236	117237	117238	117239	117240	117241	117242	117243	117244	117245	117246	117247	117248	117249	117250	117251	117252	117253	117254	117255	117256	117257	117258	117259	117260	117261	117262	117263	117264	117265	117266	117267	117268	117269	117270	117271	117272	117273	117274	117275	117276	117277	117278	117279	117280	117281	117282	117283	117284	117285	117286	117287	117288	117289	117290	117291	117292	117293	117294	117295	117296	117297	117298	117299	117300	117301	117302	117303	117304	117305	117306	117307	117308	117309	117310	117311	117312	117313	117314	117315	117316	117317	117318	117319	117320	117321	117322	117323	117324	117325	117326	117327	117328	117329	117330	117331	117332	117333	117334	117335	117336	117337	117338	117339	117340	117341	117342	117343	117344	117345	117346	117347	117348	117349	117350	117351	117352	1173
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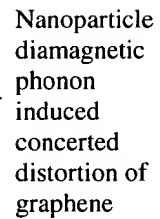


Figure 12

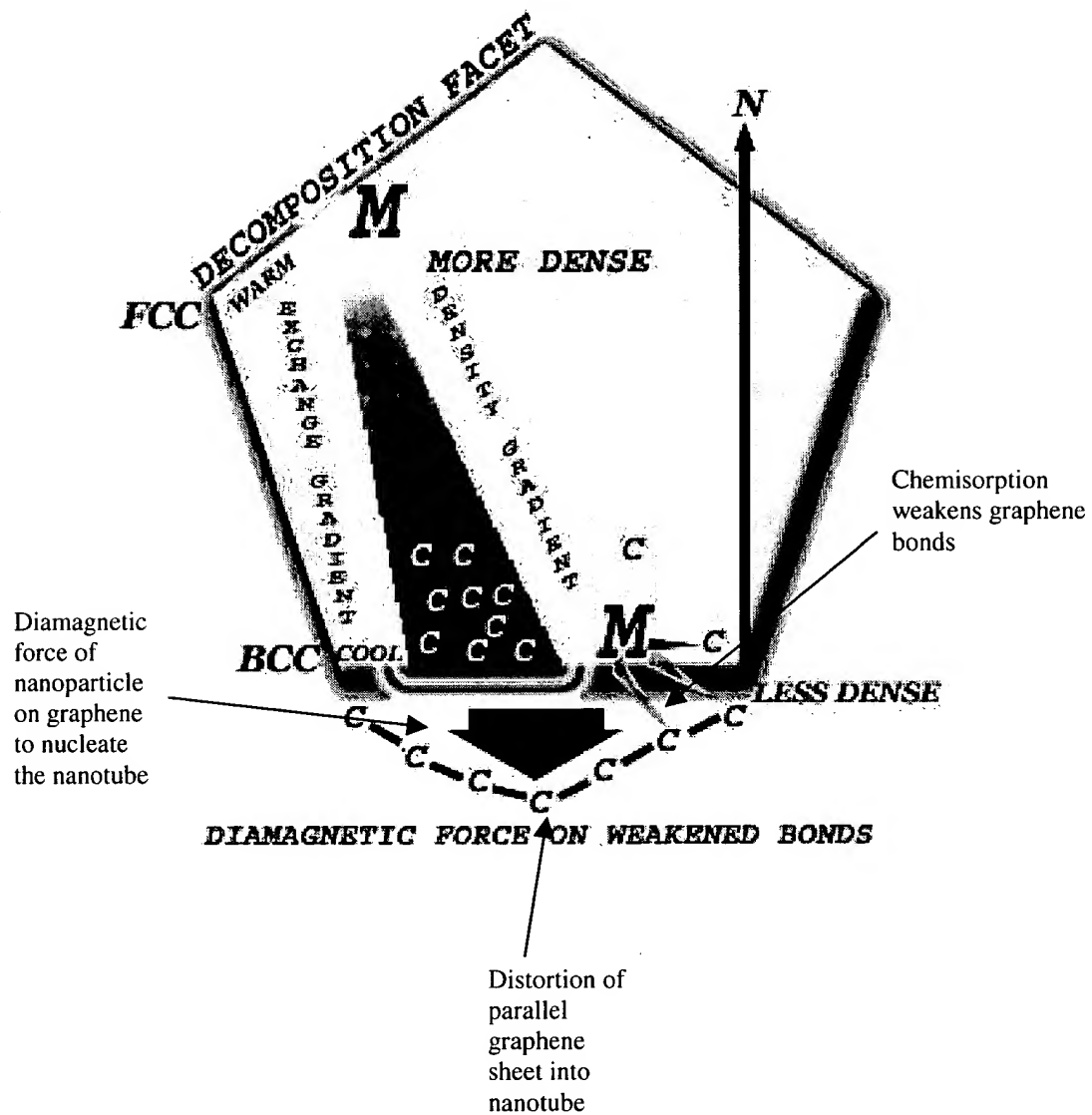


Figure 13

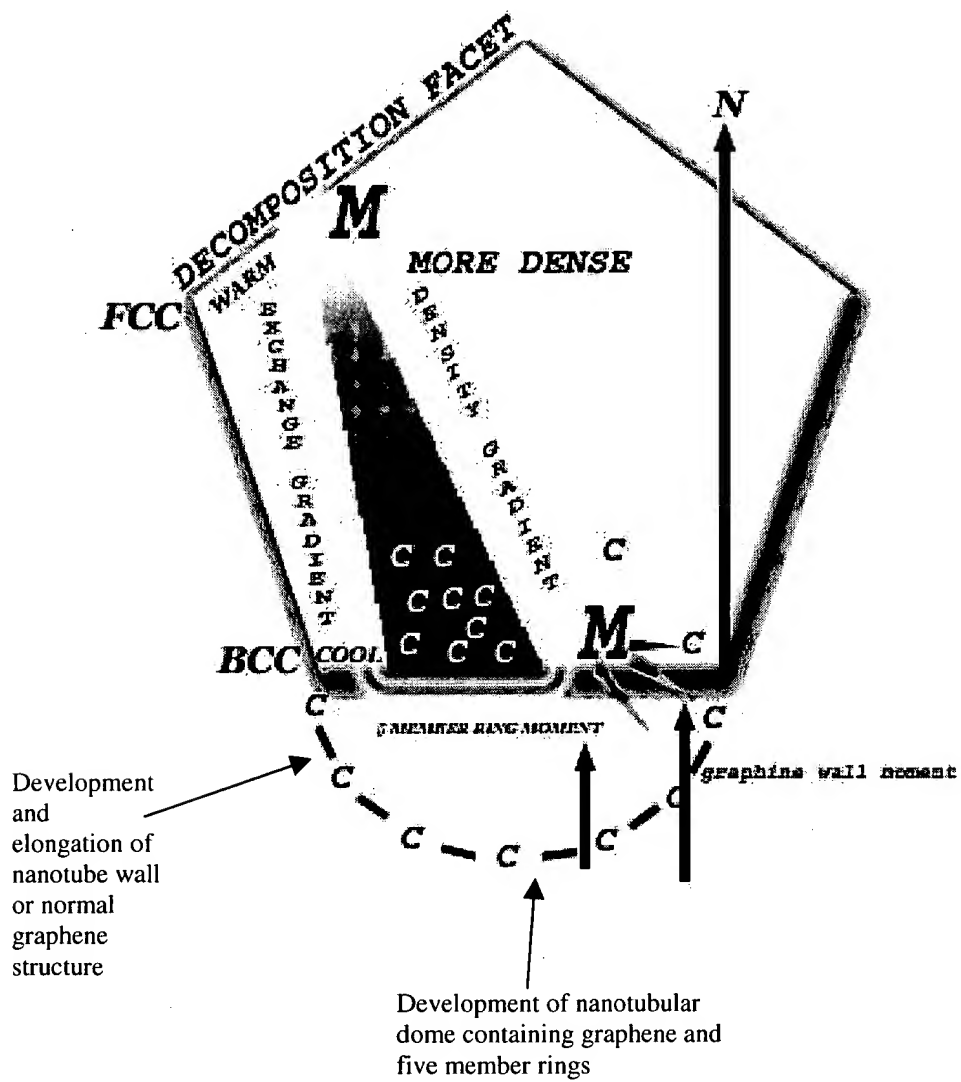


Figure 14

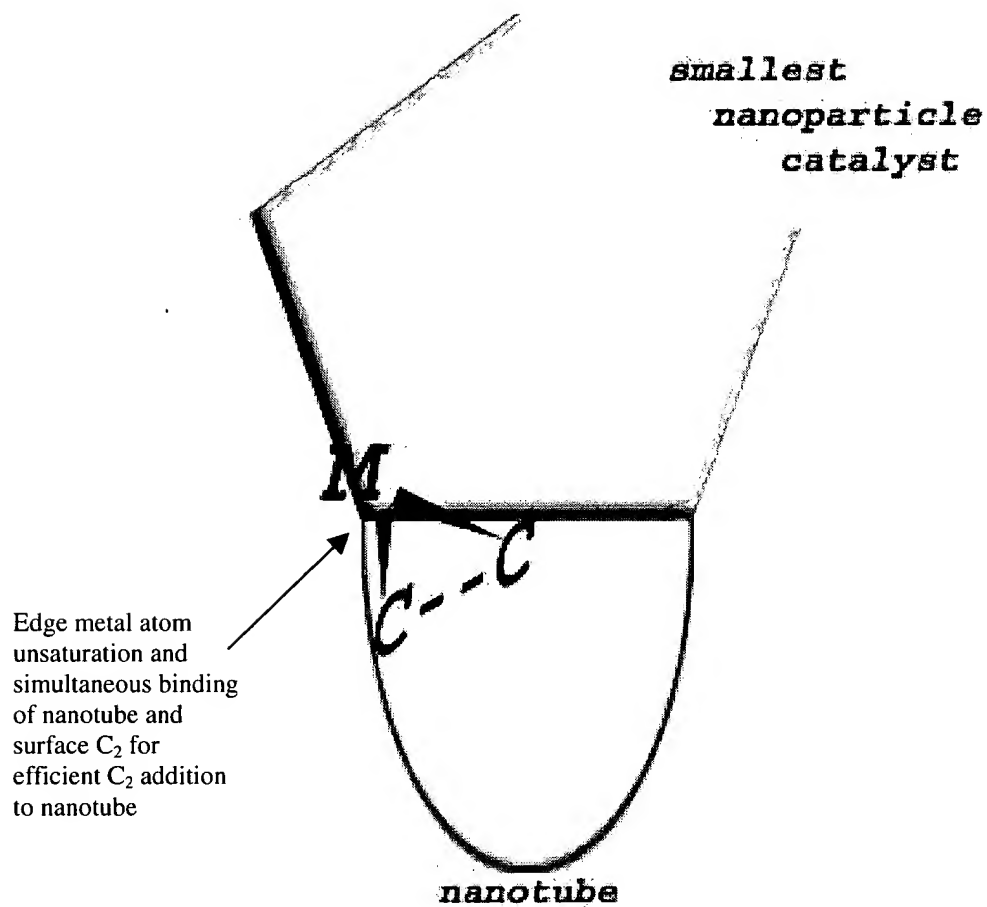


Figure 15

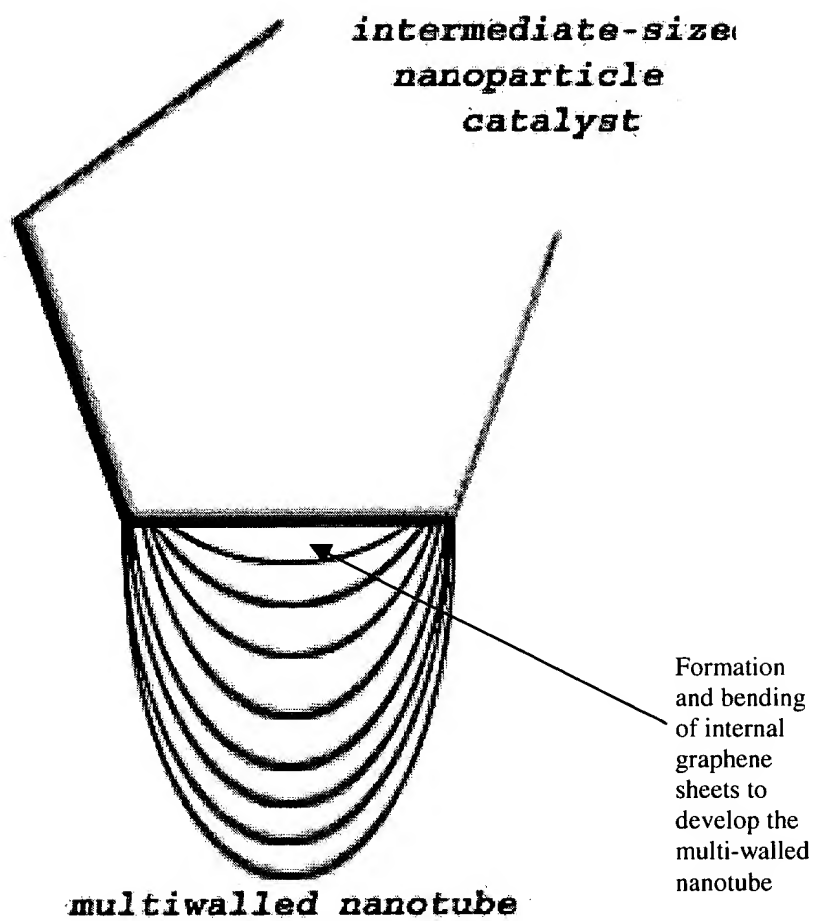


Figure 16

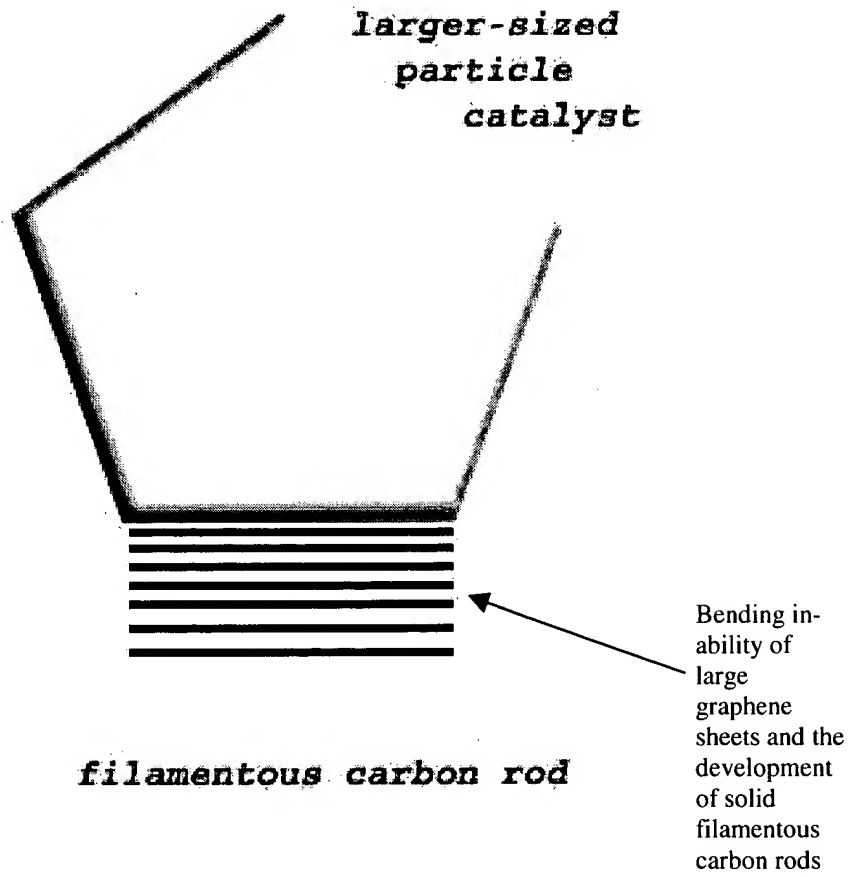
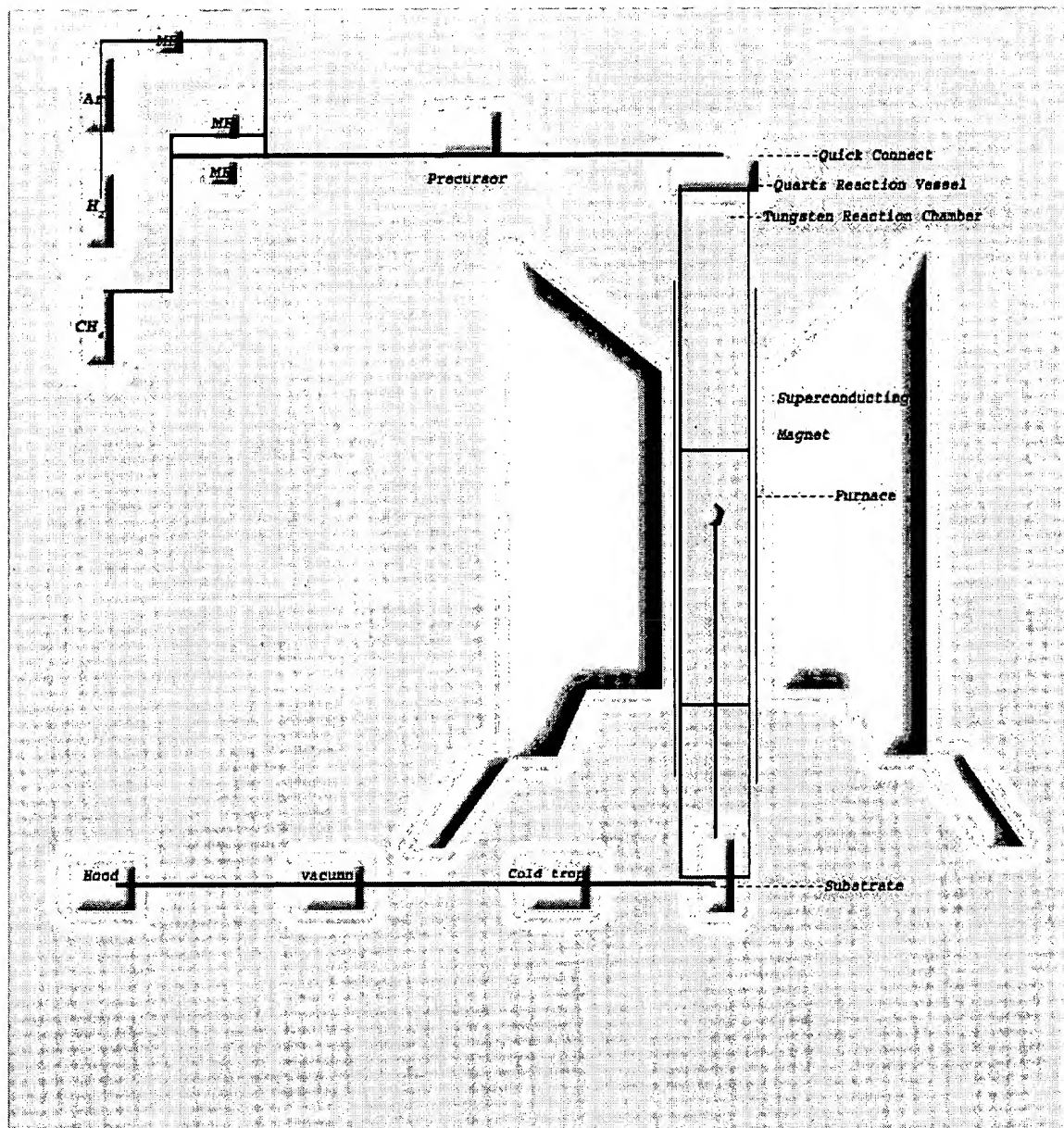


Figure 17 – Magneto Catalytic Chemical Vapor Deposition System



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Figure 18

